

## BOTANICAL NOTES AT MALLACOOTA

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These notes are based mainly on observations made last New Year, when I was invited to accompany a camping party. I had also specimens collected in previous years, at the same season, by Miss E. K. Turner, who showed me several interesting localities. Some of these plants have already been exhibited and recorded in the *Naturalist*. Although late in the season for many kinds of flowers, a large number of species was identified, including several which occur in Victoria, in the eastern parts only.

Early observers often reached Mallacoota by difficult roads; by boat from Genoa; but the settlement is now easily accessible by a good road. Several different types of vegetation can be reached within half an hour's walk from the township, and the very attractive steeper country to the north-east may be conveniently reached by boat. The climate is that characteristic of the far east of Gippsland—good rainfall, and much of it in summer, which makes for luxuriance in vegetation, especially in such favoured spots as the lower parts of the valleys.

At the township you find yourself in a grassland with scattered trees, no doubt formerly well covered. *Angophora intermedia* is the chief tree at this part, with some fairly tall Black Wattles and the Bracelet Honey Myrtle (*Melaleuca armillaris*), both as trees and as dense bushes. Along the actual margin of the lake, with a low cliff or short slope, are the Coast Banksia and some typical eastern plants—the large Mock-Olive (*Notelaea longifolia*) and the Blue Olive-berry (*Elaeocarpus cyanus*), with fringed flowers, and the well-known *Pittosporum undulatum*. The Mock-Olive and Olive-berry belong to quite different families. In the forest close behind, the Eucalypts are not always easily identified, flowers and fruits being mostly out of reach. Bloodwoods (*E. gummifera*), formerly called *E. corymbosa*, are plentiful, and the fallen fruits establish their identity. The very distinctive young growth calls attention to the Silvertop (*E. sieberi*).

In the undergrowth the Shrubby Trachymene (*T. Biliardieri*) is conspicuous in summer. This plant is very variable in leaf shape. The Wart-flower (*Tylophora barbata*) twines among the low vegetation. This is an asclepiad climber, but does not show the milky juice usual in the family or at least not readily. The Dusky Coral Pea (*Kennedya rubicunda*) occurs at places. On the ground near the settlement are large patches of the Lilac Lily (*Schelhammera undulata*), an attractive little plant with some flowers at midsummer. It is reputed rare. A trailing Lobelia (*L. purpurascens*) has the upward aspect of the flower nearly white, but tinted behind and often coloured on the back of the leaves. The Fanflower (*Scaevola vanosissima*) is common, though rather thinly scattered, as well as *Dampiera stricta*, a smaller blue flower,

and more upright plant of the same family. *Anisopogon* is a rather formidable Spear-Grass with its three awns and considerable penetrating power. It is a fine example for the study of the grass spikelet as it does everything on such a large scale. Another unusual plant is the Curlywig (*Caustis flexuosa*), a sedge with very twisted growth and leaf sheaths at intervals on its stems, which give it the aspect of a plant of the Restio family. Another *Caustis* (*C. pentandra*) occurs at moist places, but this is a more widely-known plant. The Woolly Xanthosia (*X. pilosa*), also found, has its flowers few together and is somewhat woody, so that it is not at once seen to belong to the Carrot family.

Near the main road there are some wet flats, the road naturally avoiding the more defined gullies. It is not always easy to say which plants belong to the wet ground, as with summer rain the forest as a whole is moister than in many other districts. *Restio complanatus* was found in these flats and several others of its family. *Lycopodium densum*, a rather robust form of club moss, is plentiful at places. The Flax-leaf Heath Myrtle (*Baeckea lunifolia*) seems definitely to belong to these flats. It is a shrub with slender branches and had a few flowers in January, apparently beginning. It is recorded also in a somewhat different form in a moist situation near Mt. Imlay across the border. The Mistletoe (*Loranthus vitellinus*) occurs in the forest, nearly always high up, but its fallen flowers reveal it. The flowers are large and bright coloured and the plant often quite attractive. Near the coast, but not in the actual coastal scrub, the yellowish patches of the Golden Mistletoe are seen. All we observed were associated with other Mistletoes (*Loranthus vitellinus* and *Phrygilanthus eucalyptifolius*). Definite examples were obtained of the Golden Mistletoe parasitic on each of these.

South-west of the township, near the coast, there is a large area of dwarf scrub with patches of stunted trees, which may conveniently be called moorland. The present edge of the forest is abrupt and the trees somewhat stunted, which may indicate some clearing, but the moorland presents a type of vegetation of its own, in conditions due to exposure to wind and perhaps wind-carried salt. Few flowers or fruits were seen on the trees and the foliage is not always quite normal. Some tree patches about 10 or 12 feet high were *Angophoras* with very little doubt. One patch at least about 8 ft. high with a few buds is best as a stunted form of *Eucalyptus eugenioides* (*E. Muelleriana* seems less likely). The leaves were thick. It does not seem necessary to call it a variety; it may be only a result of the environment.

The low moorland vegetation consists largely of *Casuarinas*—*C. distyla* and *C. paludosa*. The Dagger *Hakea* occurs in low dense bushes crowded with flowers in January. In the forest it is taller and not dense. *Bredemeyera ericunum* is here of smaller growth than usual and the flowers deep coloured. In fact deep colours are

common in this area, as in Common Heath, some of which was in flower, and in *Orthoceras strictum*, the Horned Orchid. In this moor also is the Flag, *Paterstonia sericea*, deep purple, but its colour is, I think, usually deeper than the *Paterstonias* near Melbourne. Other plants here include the Large Tongue Orchid and a *Thysanotus*, the Fanflower already mentioned, the Prickly Guinea Flower (*Hibbertia acicularis*), the Daphne Heath (*Brachyloma daphnoides*) and a small *Boronia*.

One of the most remarkable plants is the Lobed Spyridium (*S. serpyllaceum*), a miniature among the Rhamnaceae, sometimes only a few inches high. Its small size at this locality is noticed by the Baron, as I take it that this is his locality given as "mouth of the Genoa River." A variety of *Senecio australis* with toothed leaves (var. *Macrodonia*) occurs with the tree patches. One of the eastern Geebung, *Persoonia lanceolata*, occurs as scattered bushes in the moorland, perhaps more as the land curves over toward a creek. Near the headland coast reatree and *Melaleuca arnauilaris* give some shelter.

The lower parts of many of the valleys have a vegetation of especial interest, including several kinds of trees and various climbing plants, some of which are of large size. Lillypillies (*Eugenia Smilthii*) are prominent with Bolwarra (*Eupomatia laurina*). The *Eupomatia* often shows slender upright growth which curves over and sometimes even looks like a half climber. The young foliage is large and bright and aromatic; flower buds were present in January on low growth, but we did not see any of the flowers which are said to be strongly scented. The large *Pittosporum* also occurs, and the *Notelaea* and *Elaeocarpus* already mentioned. The *Notelaea* varies in its leaf shape and size and the fruit colour changes with the degree of maturity, but all examined seemed referable to *N. longifolia*.

The largest of the climbers is a true grape-vine, *Vitis hypoglauca*. Its thick stems form great loops from tree to tree. Some former support has gone, leaving lengths of the climber in mid-air. The Stalked Doubah, *Marsdenia vastrata*, is also common, with the peculiar flowers and milky juice usual in the Asclepiad family. Another woody climber is the Morinda (*M. jasminoides*). It was of smaller growth, but we found an opportunity to obtain flowers where a fallen tree had brought down the climber with it. The *Tecoma* is rather more widespread, not confined to this kind of valley. *Smilax australis* is a climber of the Lily family, of a peculiar section, with net veining in the leaf. It climbs by tendrils and is armed with substantial prickles, so that it is a well-known impediment to travel. The Wombat-berry (*Eustrophus latifolius*) belongs to a quite different section of the Lily family. It is an asparagoid climber, somewhat resembling in aspect the broad-leaf *Asparagus* (or *Myrsiphyllum*) of gardens, which is often called *Smilax* in error. True *Smilax* is quite different.

The Rasp-fern (*Doodia aspera*), with tinted fronds, is sometimes abundant, and in a gully in the steeper country at the Narrows we found the Creeping Polypody (*Cyclophorus serpens*). In this gully also the Grass Flag, *Libertia paniculata*, was found. Nearby a steep hillside descends to the Narrows. Here we found the Flax Lily (*Dianella coerulea*), confirming the occurrence of this species in Victoria. Here also were the Prickly Shaggy Pea (*Oxylobium trilobatum*) and the Twining Guinea Flower (*Hibbertia dentata*). At the foot of the slope *Dodonaea triquetra* occurs, as well as the common *D. viscosa*. The Muttonwood, *Rapanea* (or *Myrsine*) *Hawittiana*, occurs near the Lillypillies, but is not so limited. It extends westward also as far as the valleys of the Keilor Plains. Some examples showed an abundance of the purple fruits clothing the stems just below the foliage. This habit of flowering on old stems behind the present growth is said to be frequent in some dense warm forests elsewhere. Upstream the Lillypilly valleys merge into ordinary forest valleys, with such familiar trees as the Hazel Pomaderris and Blanketleaf (*Badfordia salicina*).

The coastal hummocks did not present any unusual features at the parts visited except a large form of the Sword Sedge (*Lepidosperma gladiatum*). The sandspit between the entrance and the cliffs carried little but *Cakile*, but this is new ground. At the few places visited on the outer coast I did not find any examples of the Scuteled Fanflower (*Scaevola eulandulacea*), nor of *Senerio spathulatus*, nor *Stachhouisia spathulata*, though these occur at Lakes Entrance. They might be found on further search. On the cliff west of the entrance there are good plants of *Alyria* and some *Correa alba*.

Among the rarer plants found at various places were the Black Bogrush (*Schoenus melanostachyus*), a *Pultenaea*, apparently a non-prickly form of *P. styphelioides*. The Mollucca Bramble, which ranges from Orbest to the Philippines, was seen; it has a rather attractive red flower. Five species of *Persea* were observed. Other interesting species, though scarcely rare, include the Tick Pea (*Desmodium varians*), seen at various places. Several species of *Helichrysum* were found, including *H. oblongifolium* and *H. Baxteri*. The Showy Cassinia was also seen. A few late flowers of *Tetratheca* were collected and seem to include both *T. pilosa* and *T. glandulosa*. No doubt many plants not in flower escaped notice. *Correa rubra* occurs in a form with a slightly pink tinge in the red flowers, differing in flower and leaf from the red *Correa* at Fernbank, near Bairnsdale, and more resembling a tall form found near Kalimna, *Scutellaria mollis*, had been found in previous years, and exhibited. *Mitrasacme*, probably *M. polymorpha*, was observed at more than one place. *Oxosera spathulata* was seen in a roadside drain in black moist soil. *Goodenia barbata*, recorded for Genoa, occurs on the road some distance west of that township.

The Herbarium staff has kindly compared several of the less familiar plants, for which we tender our best thanks.